Title (en)

METHOD AND SYSTEM FOR CONVERTING ELECTRICITY INTO ALTERNATIVE ENERGY RESOURCES

Title (de)

VERFAHREN UND SYSTEM ZUR UMWANDLUNG VON ELEKTRIZITÄT IN ALTERNATIVE STROMRESSOURCEN

Title (fr)

PROCÉDÉ ET SYSTÈME DE CONVERSION D'ÉLECTRICITÉ EN RESSOURCES D'ÉNERGIES ALTERNATIVES

Publication

EP 2449084 A4 20131211 (EN)

Application

EP 10794826 A 20100702

Priority

- US 2010040944 W 20100702
- US 22262109 P 20090702

Abstract (en)

[origin: WO2011003081A1] A system to convert electric power into methane includes a biological reactor has at least a first chamber containing at least a cathode, a culture comprising methanogenic microorganisms, and water, and a second chamber containing at least an anode. The biological reactor has an operating state wherein the culture is maintained at a temperature above 50 °C. The system also includes a source of electricity coupled to the anode and the cathode, a supply of carbon dioxide coupled to the first chamber, and an outlet to receive methane from the first chamber.

IPC 8 full level

C12M 1/00 (2006.01); **C12M 1/04** (2006.01); **C12M 1/107** (2006.01); **C12P 5/02** (2006.01)

CPC (source: EP US)

C12M 21/04 (2013.01 - EP US); **C12M 23/24** (2013.01 - EP); **C12M 23/34** (2013.01 - EP); **C12M 41/12** (2013.01 - EP); **C12M 43/00** (2013.01 - EP US); **C12M 43/04** (2013.01 - US); **C12M 43/08** (2013.01 - US); **C12P 5/023** (2013.01 - EP); Y02E 50/30 (2013.01 - EP US); Y02P 20/133 (2015.11 - EP)

Citation (search report)

- [XP] WO 2009155587 A2 20091223 - PENN STATE RES FOUND [US], et al
- [X] US 4608133 A 19860826 - MORDUCHOWITZ ABRAHAM [US], et al
- [Y] WO 2008094282 A1 20080807 - UNIV CHICAGO [US], et al
- [Y] US 2008286624 A1 20081120 - LOVLEY DEREK R [US], et al
- See references of WO 2011003081A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2011003081 A1 20110106; BR 112012000046 A2 20151006; BR 112012000046 B1 20201117; DK 2449084 T3 20201207; EP 2449084 A1 20120509; EP 2449084 A4 20131211; EP 2449084 B1 20201028; EP 3839860 A1 20210623; HU E051809 T2 20210329; TW 201116628 A 20110516; TW I500766 B 20150921; US 2021032582 A1 20210204; US 2022411733 A1 20221229

DOCDB simple family (application)

US 2010040944 W 20100702; BR 112012000046 A 20100702; DK 10794826 T 20100702; EP 10794826 A 20100702; EP 20203855 A 20100702; HU E10794826 A 20100702; TW 99121889 A 20100702; US 202016874373 A 20200514; US 202217690726 A 20220309